



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/630,002	07/29/2003	Martin A. Rossing	P-8630.00	8545
27581	7590	01/11/2006	EXAMINER	
MEDTRONIC, INC. 710 MEDTRONIC PARK MINNEAPOLIS, MN 55432-9924			JACKSON, BRYAN M	
			ART UNIT	PAPER NUMBER
			3762	

DATE MAILED: 01/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	10/630,002		ROSSING, MARTIN A.	
	Examiner		Art Unit	
	Bryan M. Jackson		3762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 7/29/2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2/2/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION***Information Disclosure Statement***

The Information disclosure statement (IDS) submitted on 2/2/2005 is acknowledged. The submission is in compliance with the provisions of 37 CFR 1.97 and 1.98. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Norton (2004/0225327) in view of Kuehn (5201865).

Norton discloses defibrillation electrodes (fig 1; 30, 32, 26), a charging circuit (fig 2, 64), control circuitry (fig 2, 44) to measure charge across one or more capacitors, a processor (fig 4, 154), a fully formed charge energy, which is the energy required to fully charge a capacitor in its best performing state (considered to be an ideal state), a reformation method, a deformed charge energy, which is the energy needed to charge a capacitor to a rated voltage, and a deformation factor, which is the ratio of the deformed charge energy to the fully formed charge energy (pg 7, see Table & paragraph 0063).

Art Unit: 3762

Norton discloses the claimed invention except for a first & second voltage for a capacitor and a measurement of charge time for a capacitor. Kuehn teaches charging a capacitor to a first reference voltage, discharging the capacitor, and measuring the discharge time from commencement of discharge until a second reference voltage value (col 5, ln 29-35) to provide a first & second reference voltage and a measurement of charge time for a capacitor. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the deformation factor with respect to energy (joules) as taught by Norton, with charging a capacitor to a first reference voltage, discharging the capacitor, and measuring the discharge time from commencement of discharge until a second reference voltage value as taught by Kuehn, in order to allow a deformation factor with respect to energy (joules) to be calculated with respect to a capacitor's charge time from a second charge time interval to an ideal charge time interval to determine a capacitor's need for reformation.

Claims 2 and 4-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Norton and Kuehn as applied to claim 1 and 3 above, and further in view of Kroll (5925068). Norton and Kuehn disclose the claimed invention except for the measurement of capacitor charge time performed during a reformation process. Kroll teaches that it is known to utilize a capacitor's charge time measured during capacitor reformation, and if it exceeds a predetermined maximum threshold time, then an RRT (Recommended Replacement Time) signal is issued (col 3, ln 36-40) to provide a measurement

Art Unit: 3762

of capacitor charge time during capacitor reformation. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the measurement of a capacitor's charge time to obtain a deformation factor as taught by Norton and Kuehn, with a capacitor charge time measured during capacitor reformation as taught by Kroll, to provide a measurement of a capacitor's charge time during a capacitor reformation process.

Norton, Kuehn, and Kroll disclose the claimed invention except for the reducing, increasing, and proportionately adjusting a scheduled time associated with a next reformation process based on a deformation factor. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the deformation factor with respect to the measurement of a capacitor's charge time and a Recommended Replacement Time after exceeding a predetermined threshold as taught by Norton, Kuehn, and Kroll, with reducing, increasing, and proportionately adjusting a scheduled time associated with a next reformation process based on a deformation factor since it was known in the art that reducing, increasing, and proportionately adjusting a scheduled time associated with a next reformation process based on a deformation factor is used to provide a time period for the reformation of failing capacitors via a predetermined threshold with respect to a deformation factor dependent on a capacitor's charge time.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Harguth (6283985) discloses reforming wet-tantalum

Art Unit: 3762

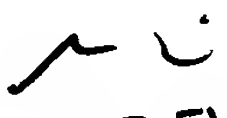
capacitors in implantable defibrillators and other medical devices. Norton (2004/0064157, 2004/0186519) discloses a method and apparatus for maintaining energy storage in an electrical storage device, and methods and apparatus for reforming high-voltage electrolytic capacitors. Lyden (2004/0073264) discloses a method for monitoring end of life for battery. Silvian (6096062, 5350405) discloses a method and apparatus for maintaining a high voltage capacitor in an implantable cardiac device, and a method and apparatus for capacitor tolerance compensation in a cardiac stimulating device. Menken (5800461) discloses a constant charge time of defibrillation capacitor.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bryan M. Jackson whose telephone number is 571-272-7335. The examiner can normally be reached on Monday through Friday, 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela Sykes can be reached on 571-272-4955. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3762

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


GEORGE R. EVANISKO
PRIMARY EXAMINER

1/9/06